

## WHAT IS CLAIMED IS:

- 1/ An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:
- 5 of:
- a) the nucleotide sequence as set forth in Figure 1A (SEQ ID NO: 1);
  - b) the nucleotide sequence encoding the polypeptide from residues 1-200 or from residues 21-200 as set forth in Figure 1A (SEQ ID NO: 1);
  - 10 c) a nucleotide sequence encoding a polypeptide that is at least about 70 percent identical to the polypeptide as set forth in Figure 1A (SEQ ID NO: 1);
  - 15 d) a naturally occurring allelic variant or alternate splice variant of any of (a), (b) or (c );
  - e) a nucleotide sequence complementary to any of (a), (b) or (c );
  - f) a nucleotide sequence of (b), (c ) or (d) encoding a polypeptide fragment of at least about 25, 50, 75, 100, or greater than 100 amino acid residues;
  - 20 g) a nucleotide sequence of (a), (b) or (c ) comprising a fragment of at least about 10, 15, 20, 25, 50, 75, 100, or greater than 100 nucleotides; and
  - 25 h) a nucleotide sequence which hybridizes under stringent conditions to any of (a)-(g).

- 30 of:
- 2/ An isolated nucleic acid molecule comprising a nucleotide sequence selected from the group consisting of:
- a) the nucleotide sequence as set forth in Figure 2A (SEQ ID NO: 11) or Figure 3A (SEQ ID NO: 6) or Figure 12A (SEQ ID NO: 16);
  - b) the nucleotide sequence encoding the polypeptide as set forth in Figure 2A (SEQ ID NO: 6) from residues 1-322 or from residues 47-322, or as set
  - 35 from residues 1-322 or from residues 47-322, or as set

5      forth in Figure 3A (SEQ ID NO: 11) from residues 1-288  
or from residues 19-288, 20-288, 21-288, 22-288, 24-  
288, or 28-288 or as set forth in Figure 12A from  
residues 1-302, or from residues 19-302, 20-302, 21-  
302, 22-302, 24-302 or 28-302;

10      c) a nucleotide sequence encoding a  
polypeptide that is at least about 70 percent identical  
to the polypeptide as set forth in Figure 2A (SEQ ID  
NO: 6) or Figure 3A (SEQ ID NO: 11) or Figure 12A (SEQ  
ID NO: 6);

15      d) a naturally occurring allelic variant or  
alternate splice variant of any of (a), (b) or (c );

20      e) a nucleotide sequence complementary to any  
of (a), (b) or (c );

25      f) a nucleotide sequence of (b), (c ) or (d)  
encoding a polypeptide fragment of at least about 25,  
50, 75, 100, or greater than 100 amino acid residues;

30      g) a nucleotide sequence of (a), (b) or (c )  
comprising a fragment of at least about 10, 15, 20, 25,  
50, 75, 100, or greater than 100 nucleotides; and

35      h) a nucleotide sequence which hybridizes  
under stringent conditions to any of (a)-(g).

40      3. The nucleic acid molecule of Claims 1 or 2  
wherein the nucleotide sequence is operably linked to  
an expression control sequence.

45      4. A host cell comprising the nucleic acid  
molecule of Claim 2.

50      5. The host cell of Claim 3 which is a eucaryotic  
cell.

55      6. The host cell of Claim 3 which is a procaryotic  
cell.

5 7. A process for producing a polypeptide comprising growing a culture of the host cell of Claim 3 in suitable culture medium and isolating the polypeptide from the culture.

8. A polypeptide produced by the process of Claim 7.

9. A polypeptide encoded by the nucleic acid molecule of Claim 1.

10. A polypeptide encoded by the nucleic acid molecule of Claim 2.

15 11. An isolated polypeptide comprising the amino acid sequence selected from the group consisting of:

a) the amino acid sequence as set forth in Figure 1A (SEQ ID NO: 2);

20 b) the mature amino acid sequence as set forth in Figure 1A (SEQ ID NO: 2) comprising a mature amino terminus at residue 21;

c) a fragment of the amino acid sequence set forth in Figure 1A (SEQ ID NO: 2) comprising at least about 25, 50, 75, 100, or greater than 100 amino acid residues;

d) an ortholog of (a), (b) or (c); and

e) an allelic variant or alternative splice variant of (a), (b), (c) or (d).

30 12. An isolated polypeptide comprising the amino acid sequence selected from the group consisting of:

a) the amino acid sequence as set forth in Figure 2A (SEQ ID NO: 7) or Figure 3A (SEQ ID NO: 12) or Figure 12A (SEQ ID NO: 17);

35 b) the mature amino acid sequence as set forth in Figure 2A (SEQ ID NO: 7) comprising a mature

amino terminus at residues 47, or Figure 3A (SEQ ID NO: 12) comprising a mature amino terminus at any of residues 19, 20, 21, 22, 24 or 28, or Figure 12A (SEQ ID NO: 17) comprising a mature amino terminus at any of  
5 residues 19,20,21,22,24,or 28;

c) a fragment of the amino acid sequence set forth in Figure 2A (SEQ ID NO: 7) or Figure 3A (SEQ ID NO: 12) or Figure 12A (SEQ ID NO: 17) comprising at least about 25, 50, 75, 100, or greater than 100 amino  
10 acid residues;

d) an ortholog of (a), (b) or (c ); and

e) an allelic variant or alternative splice variant of (a), (b), (c) or (d).

15 13. An antibody or fragment thereof specifically binding the polypeptide of Claims 9, 10, 11 or 12.

14. The antibody of Claim 11 which is a monoclonal antibody.

20 15. The antibody of Claim 13 which is a human antibody.

16. The antibody of Claim 13 which is a humanized  
25 or CDR-grafted antibody.

17. The antibody or fragment of Claim 13 which binds B7RP1 or to a B7RP1 extracellular domain.

30 18. The antibody or fragment of Claim 13 which inhibits the binding of B7RP1 to CRP1.

19. A composition comprising the polypeptide of Claims 9, 10, 11 or 12 and a pharmaceutically  
35 acceptable carrier, adjuvant, solubilizer, stabilizer or anti-oxidant.

20. A polypeptide comprising a derivative of the polypeptide of Claims 9, 10, 11 or 12.

5        21. The polypeptide of Claim 20 which is covalently modified with a water-soluble polymer.

22. A fusion polypeptide comprising the polypeptide of Claims 9, 10, 11 or 12 fused to a  
10 heterologous amino acid sequence.

23. The fusion polypeptide of Claim 22 wherein the heterologous amino acid sequence is an IgG constant domain or fragment thereof.  
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24. A method for treating, preventing or ameliorating a T cell mediated disorder comprising administering to an animal the polypeptide of Claims 9, 10, 11 or 12.  
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25. A method of diagnosing a T cell mediated disorder or a susceptibility to a T cell mediated disorder in an animal comprising:

a) determining the presence or amount of  
25 expression of the polypeptide of Claims 9, 10, 11 or 12; and

b) diagnosing a T-cell mediated disorder or a susceptibility to a T-cell mediated disorder based on the presence or amount of expression of the  
30 polypeptide.

26. A method of identifying a test molecule which binds to a polypeptide comprising:

a) contacting the polypeptide of Claims 9, 10, 11 or 12 with a test molecule; and  
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b) determining the extent of binding of the polypeptide to the test molecule.

27. The method of Claim 26 further comprising  
5 determining the activity of the polypeptide when bound to the compound.

28. A method of regulating T cell activation or proliferation in an animal comprising administering to  
10 the animal the nucleic acid molecule of Claims 1, 2 or 3.

29. A transgenic non-human mammal comprising the nucleic acid molecule of Claim 3.  
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30. A method of suppressing an immune response in an animal comprising administering to the animal an antagonist of CRP-1 or B7RP-1.

20 31. The method of Claim 30 wherein the antagonist is an antibody which binds B7RP-1.

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